

## **PRE-APPEAL BRIEF REMARKS/ARGUMENTS**

Applicants respectfully submit that the rejections under 35 U.S.C. 112 and 103 are improper. In particular, the 112 rejections are improper because the “phase mixing” language is described in the specification. The 103 rejections are improper because the cited references do not teach all of the limitations of the claims.

As a preliminary matter, though, the Advisory Action indicates that there is some confusion regarding the requirements of 35 U.S.C. 112, second paragraph, and 35 U.S.C. 103. In the Advisory Action, the Examiner states:

Applicants argues that:

- (1) The 35 U.S.C. 112 2nd ¶ Rejection on the language “phase mixing” does not necessitated by the Applicant’s Amendment. However, the Examiner respectfully disagrees because “phase mixing” is not clearly and precisely clarified in the claim. The Examiner must interpret it as best understood which may or may not mean as applicant intended. Therefore, the rejection deems proper.
  - (2) The 35 U.S.C. 112 2nd ¶ Rejection, i.e. lack of antecedent basis, would create confusion in examination process. Amendment to clarify the lack of antecedent basis would be necessitated by the Applicant’s Amendment which properly results in Final Action.
  - (3) The 35 U.S.C. 103(a) Rejections present new reasoning. However, the Examiner respectfully disagrees because the Rejections are the same, the new reasonings were presented to further explain the Examiner’s views and rebut applicant’s arguments. The Final Action, therefore, deems proper.
- Advisory Action, 4/28/10, page 2 (sic all).

These statements refer to Applicants’ previous arguments in the response mailed March 8, 2010, that the finality of the previous Office Action was premature because the 112 and 103 rejections were not necessitated by the amendments to the claims. However, the fact that the finality of the previous Office Action was premature is not related to how the indicated “phase mixing” language is supported by the specification. Similarly, the fact that the finality of the previous Office Action was premature is not related to how the cited references fail to teach the limitations of the claims. These are three separate issues, and each issue should be addressed independently. Unfortunately, it appears that the Examiner only attempts to address the argument of premature finality, without understanding or separately responding to the arguments for the 112 and 103 rejections.

### Claim Rejections under 35 U.S.C. 112

Claim 1 was rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention. In particular, the Examiner requests clarification of the language “phase mixing” recited in claim 1.

In regard to the 112 rejection, Applicants respectfully note that there is ample description of embodiments of “phase mixing” presented in the specification of the present application. For reference, Applicants directed the Examiner to the description available at page 5, line 3, through page 7, line 12. For brevity, the cited portion of the present application is not duplicated herein. However, it should be noted that phase mixing generally refers to generating grey scales in adjacent pixels using different patterns or sequences of pixel states. See, page 5, lines 3-6. Additionally, it should be noted that a specific example is provided at page 6, line 18, through page 7, line 12. Additional portions of the specification provide additional details regarding embodiments of phase mixing. Therefore, these and other portions of the originally filed specification provide a proper and sufficiently thorough understanding of embodiments of the “phase mixing” recited in the claim.

Furthermore, it should be noted that, in light of the ample contextual description provided in the present application, it is improper for the Examiner to suggest a substitute interpretation of “phase mixing” that is inconsistent with the described embodiments. Specifically, in the Office Action the Examiner interprets “phase mixing” as the PWM having different durations (i.e. different rising and/or falling edges) corresponding to predetermined grayscale values. Office Action, 1/7/10, page 2.

Despite the Examiner’s suggested interpretation, there is nothing in the specification to substantiate this asserted interpretation. Rather, the description provided in the present application describes embodiments which do not involve “PWM [signals] having different durations corresponding to predetermined grayscale values.” Therefore, the Examiner’s asserted interpretation is improper because it is inapposite and unrelated to the actual embodiments described in the specification.

Furthermore, it should be noted that using an interpretation, as suggested by the Examiner, that is inconsistent with the actual description of the present application does

not further advance prosecution because such an approach merely confuses the language of the claim with unintended and improper interpretations. Moreover, an interpretation of the claim language that is inconsistent with the specification is not within the scope of the broadest reasonable interpretation. See, *In Re Suitco Surface, Inc.* (Fed. Cir. 2010).

Therefore, Applicants respectfully submit that the Examiner's approach and suggested interpretation are improper because the Examiner's suggested interpretation is outside of the broadest reasonable interpretation and does not advance prosecution, but merely attempts to disregard the actual language of the claims and the specification of the present application.

#### Claim Rejections under 35 U.S.C. 103

Claims 1-13 were rejected based Scheffer et al. (U.S. Pat. No. 5,485,173, hereinafter Scheffer), Kobayashi (U.S. Pat. No. 6,927,785, hereinafter Kobayashi), and Okamoto (U.S. Pat. No. 6,094,184, hereinafter Okamoto). In particular, claims 1-9 and 13 were rejected under 35 U.S.C. 103(a) as being unpatentable over Scheffer in view of Kobayashi. Claims 10-12 were rejected under 35 U.S.C. 103(a) as being unpatentable over Scheffer in view of Kobayashi and further in view of Okamoto. However, Applicants respectfully submit that these claims are patentable over Scheffer, Kobayashi, and Okamoto for the reasons provided below.

#### Independent Claim 1

Claim 1 is patentable over the combination of Scheffer and Kobayashi because the combination of cited references does not teach all of the limitations of the claim. Claim 1 recites, in part, "the column voltage  $G_j(t)$  to be supplied to a column electrode has always less transitions per row selection time than the number  $n_{pwm}$  of sub selection time slots of the row selection time" (emphasis added).

In support of the rejection of claim 1, the reasoning in the Office Action states:

However, **Scheffer et al. do not teach** that the row selection time is subdivided in  $n_{pwm}$  sub selection time slots, phase mixing grey scales, and column voltage  $G_j(t)$  has always less transition s per row selection than the sub selection time slots.

In the same field of endeavor, **Kobayashi teaches**

\*\*\*

wherein the column voltage  $G_j(t)$  to be supplied to a column electrode has always less transitions per row selection time than the number  $n_{pwm}$  of sub selection time slots of the row selection time (col. 7, Ln. 66-68, Col. 8, Ln. 1-6).  
Office Action, 1/7/10, page 4 (underlining added).

Thus, the reasoning in the Office Action relies on Kobayashi as purportedly teaching the indicated limitations of the claim. However, Kobayashi does not teach the indicated limitations because Kobayashi is silent with regard to a number of transitions per row selection time. Rather, the cited portion of Kobayashi explicitly states:

If the 6-bit grayscale data is “111111” (grayscale 1), by way of example, the pulse width modulation signal has a transition point within each frame defined by the edge (ED1) of the clock pulse signal GCP determined by the high-order four bits “1111” and the falling edge of the reset signal GRES, and the output is sequentially switched in each frame through the patterns PWM 1-1, PWM 1-2, PWM 1-3, and PWM 1-4 determined by the low-order two bits “11”.  
Kobayashi, col. 7, line 66, through col. 8, line 6 (underlining added).

Thus, even though Kobayashi describes a PWM signal with a transition point in each frame, Kobayashi is nevertheless silent regarding a number of transitions per row selection time relative to a number of sub-selection time slots. The generic description of a PWM signal with a transition point in each frame simply does not address the more specific recited language of a number of transitions per row selection time relative to a number of sub-selection time slots. Moreover, there is no explanation in the reasoning of the Office Action to fill in the gaps between the generic teachings of Kobayashi and the more specific language recited in the claim. Therefore, the description in Kobayashi does not teach the indicated language of the claim.

For the reasons presented above, the combination of Scheffer and Kobayashi does not teach all of the limitations of the claim at least because Kobayashi does not teach a number of transitions per row selection time relative to a number of sub-selection time slots, as recited in the claim. Accordingly, Applicants respectfully assert claim 1 is patentable over the combination of Scheffer and Kobayashi because the combination of cited references does not teach all of the limitations of the claim.

### Dependent Claims 6 and 7

Claims 6 and 7 are also patentable over the combination of Scheffer and Kobayashi because Kobayashi does not teach phase mixing tables, despite the Examiner's assertions. Rather, the cited portions of Kobayashi merely describe 6-bit grayscale data read from a RAM 210 (Kobayashi, Fig. 7; col. 9, lines 26-28) and signals for controlling the RAM 80 (Kobayashi, Fig. 4; col. 8, lines 65-67). However, neither of these descriptions teaches phase mixing tables. In particular, the description of the grayscale data within the RAM 210 lacks specificity to conclude that the RAM might store phase mixing tables. Therefore, the asserted combination of Scheffer and Kobayashi does not teach all of the limitations of the claim because Kobayashi does not teach phase mixing tables, as recited in the claims. Accordingly, claims 6 and 7 are patentable over the combination of Scheffer and Kobayashi because the combination of cited references does not teach all of the limitations of the claims.

### **CONCLUSION**

Applicants respectfully request reconsideration of the claims in view of the remarks made herein. A notice of allowance is earnestly solicited.

At any time during the pendency of this application, please charge any fees required or credit any over payment to Deposit Account **50-4019** pursuant to 37 C.F.R. 1.25. Additionally, please charge any fees to Deposit Account **50-4019** under 37 C.F.R. 1.16, 1.17, 1.19, 1.20 and 1.21.

Respectfully submitted,

/mark a. wilson/

Date: May 28, 2010

Mark A. Wilson  
Reg. No. 43,994  
Wilson & Ham  
1811 Santa Rita Road, Suite 130  
Pleasanton, California 94566  
Phone: (925) 249-1300  
Fax: (925) 249-0111